

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000453**Date Inspected:** 31-Aug-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Huang Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** MTR's/PQR**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and/or discovered the following.

Material Test Reports

Quality Assurance (QA) Inspector Brannon reviewed Material Test Reports (MTRs) for material received in the ZPMC yard. QA Inspector Brannon checked MTRs for material designation, heat numbers, weights, carbon equivalent, sulfur content, fine grain particles, through-thickness, ultrasonic testing and reduction of area.

PQR ID#HP2007257-1

QA Inspector Brannon periodically observed ZPMC welder Mr. Zhuhai Ping, fillet welding for Procedure Qualification Record Test (PQR) #HP-2007 257-1 for T-joint fillet single and multiple pass fillet welds. Base metal was designated as A-709 Grade HPS-485W (Heat # 0710259N). Mr. Ping was observed welding in the 1F (flat), position utilizing a shielded metal arc welding (SMAW) process using a 5.0mm diameter electrode, classification E7018-1, Brand: THJ506Fe-1, manual process. Mr. Ping appeared to be using proper inter-pass cleaning methods by using manual steel wire brush, and manual chisel and hammer. QA Inspector observed preheat and welding parameters measured by the QC Inspector Mr. Huang Wei and ABF representative Mr. Danny McDonald. QA Inspector Brannon witnessed pass 1 on one side and passes 2 and 3 on the other side. The QA Inspector performed random verifications of the welding parameters for a total of 3 passes. QA Inspector Brannon found that the welding parameters taken by QC Inspector Mr. Huang Wei appeared to be in accordance with the contract documents. The QA Inspector Brannon performed visual inspection on the PQR# HP-2007 257-1 test coupon and test coupon appears to be in general compliance with the contract documents. The QA

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Inspector Brannon assigned Caltrans lot # B22-029-07 to this PQR coupon. This Caltrans 6031 report is supported by Caltrans 6032 report for this date.

Charpy Vee Notch Testing

QA Lead Inspector McClary randomly observed ZPMC impact testing of Charpy Vee Notch Test (CVN) specimens for rolled wide flange beams. Also, observing (CVN) are ZPMC Mr. Ye Yongjun and ABF representative Mr. Jeff Evans. Results of testing are as follows:

Six (6) Charpy Vee Notch (CVN) Test Specimens retests

Specimen numbers *H1-2(14J), *H1-3(21J) - heat number 106844 - W-18x46, ASTM A709 G50/A6.

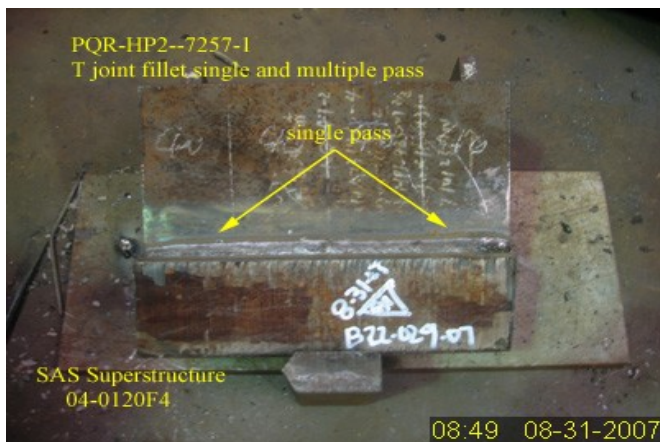
Specimen numbers H2-1(35 J), *H2-3(14J) - heat number 106844 - W-18x46, ASTM A709 G50/A6

Specimen numbers *H3 (35 J) heat number 106847 - W-18x46, ASTM A709 G50/A6.

Specimen numbers H9-1(78 J) heat number 106876 - W-21x57, ASTM A709 G50/A6

The tests results identified above have been tested at 4 degrees Celsius and were observed and recorded as having impact energy values stated above. Note: 1- Failing test identified above have an * symbol and will be retested. Note: 2- ABF Mr. Jeff Evans stated that rolled wide flange beams have not been released to Caltrans and that the impact testing is extra testing that American Bridge/Fluor Enterprises, a JV (ABF) wanted to administer. Also, See ZPMC Additional CVN Test Report for Shapes for more detail information Report #G-J-CL(H)-787-20070831-2-1, & #G-J-CL(H)-787-20070831-2-2.

The following digital photograph illustrates PQR test ID#HP-2007-257-1 after completion.



Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Brannon, Sherri

Quality Assurance Inspector

Reviewed By: Cuellar, Robert

QA Reviewer